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     (FILE 'HOME' ENTERED AT 12:29:06 ON 01 APR 2003)

     FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE' ENTERED AT 12:29:21 ON 01 APR 2003
L1          3408 S (ERYTHROPOIETIN RECEPTOR)
L2           277 S L1 AND (EXTRACELLULAR DOMAIN)
L3            42 S L2 NOT PY >1993
L4            21 DUP REM L3 (21 DUPLICATES REMOVED)

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=> d 17 ab

L7 ANSWER 17 OF 29 MEDLINE DUPLICATE 5
AB The interaction of erythropoietin (Epo) with the **erythropoietin receptor** (EpoR) supports erythropoiesis. The EpoR is a member of the well-recognized cytokine receptor superfamily characterized by four conserved cysteines and a WSXWS domain in the extracellular portion of the molecule. To localize ligand-binding determinants of the EpoR near the WSXWS domain, we tested the ligand-binding ability of the wild-type human EpoR **extracellular domain** (EREx), two truncated and three chimeric constructs with the interleukin-2 receptor beta subunit (IL2R beta). Constructs were expressed in E. coli as GST fusion proteins linked to a solid-phase support and assayed for binding to 125I Epo. As previously shown, Epo bound specifically to the expressed **extracellular domain**, EREx. Epo did not bind to truncated receptors lacking either the entire fifth exon or the WSXWS domain. Epo also did not bind to chimeric receptors that had the amino acids encoded by the fifth exon replaced by IL2R beta or that had the amino acids subsequent to asparagine residue 209 replaced by IL2R beta. Specific binding was demonstrated for a construct in which the WSXWS was replaced by that of IL2R beta. We conclude that the amino acids encoded by this 5' portion of exon 5 of the EpoR are necessary for ligand binding and that the WSXWS domain is necessary for Epo binding but is not involved in ligand-binding specificity. We also speculate that if the putative soluble form of the EpoR is expressed (predicted to lack exon 5), it does not bind Epo and therefore may serve a physiologic purpose other than ligand binding.

=> d 17 bib

L7 ANSWER 17 OF 29 MEDLINE DUPLICATE 5
AN 96103537 MEDLINE
DN 96103537 PubMed ID: 7498361
TI Localization of an essential ligand binding determinant of the human **erythropoietin receptor** to a domain N-terminal to the WSXWS motif: implications for soluble receptor function.
AU Schimmenti L A; Blechert G; Harris K W; Winkelmann J C
CS University of Minnesota, Department of Pediatrics and Medicine, USA.
NC DK44134 (NIDDK)
HL08540 (NHLBI)
SO EXPERIMENTAL HEMATOLOGY, (1995 Dec) 23 (13) 1341-6.
Journal code: 0402313. ISSN: 0301-472X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199601
ED Entered STN: 19960217
Last Updated on STN: 19960217
Entered Medline: 19960116

=> d l5 7, 13, 17, 14 bib ab

L5 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1994:619 CAPLUS
DN 120:619
TI Signal transduction through the receptor for erythropoietin
AU Ihle, James N.; Quelle, Frederick W.; Miura, Osamu

CS Dep. Biochem., St. Jude Child. Res. Hosp., Memphis, TN, 38105, USA
SO Seminars in Immunology (1993), 5(5), 375-89
CODEN: SEIME2; ISSN: 1044-5323
DT Journal; General Review
LA English
AB A review, with 123 refs., on the functional responses of the **erythropoietin receptor**; on mechanisms of **erythropoietin receptor** signal transduction; on the functional responses of the receptors in non-myeloid cells; on the potential protein tyrosine kinases in erythropoietin signaling; on the **extracellular domain** of the **erythropoietin receptor**; on the role of receptor dimerization in function; on the interaction of the receptor with gp55; and on the functional domains within the cytoplasmic domain of the receptor.

L5 ANSWER 13 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1993:200416 BIOSIS
DN PREV199344096666
TI Purification of an active form of the **extracellular domain** of the human **erythropoietin receptor** and isolation of an EPO-soluble receptor complex.
AU Johnson, Dana L.; Middleton, Steven A.; McMahon, Frank J.; Kroon, Daniel; Tsao, Eric; Mulcahy, Linda S.; Jolliffe, Linda K.
CS R. W. Johnson Pharm. Res. Inst., Dep. Mol. Cell. Biol., Route 202, Box 300, Raritan, NJ 08869 USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART A, pp. 47.
Meeting Info.: Keystone Symposium on Protein Purification and Biochemical Engineering Santa Fe, New Mexico, USA January 15-21, 1993
ISSN: 0733-1959.
DT Conference
LA English

L5 ANSWER 17 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1991:519614 BIOSIS
DN BR41:120329
TI LIGAND BINDING PROPERTIES OF THE HUMAN **ERYTHROPOIETIN RECEPTOR EXTRACELLULAR DOMAIN** EXPRESSED IN ESCHERICHIA-COLI.
AU HARRIS K W; MITCHEL R A; WINKELMANN J C
CS DEP. MED., UNIV. MINN., MINNEAPOLIS, MINN.
SO JOINT MEETING OF THE CENTRAL SOCIETY FOR CLINICAL RESEARCH, MIDWEST SECTION AMERICAN FEDERATION FOR CLINICAL RESEARCH, MIDWEST SOCIETY FOR PEDIATRIC RESEARCH AND CENTRAL REGION SOCIETY FOR INVESTIGATIVE DERMATOLOGY, CHICAGO, ILLINOIS, USA, NOVEMBER 6-8, 1991. CLIN RES. (1991) 39 (3), 724A.
CODEN: CLREAS. ISSN: 0009-9279.
DT Conference
FS BR; OLD
LA English

L5 ANSWER 14 OF 21 MEDLINE DUPLICATE 6
AN 92340575 MEDLINE
DN 92340575 PubMed ID: 1321832
TI Ligand binding properties of the human **erythropoietin receptor extracellular domain** expressed in Escherichia coli.
AU Harris K W; Mitchell R A; Winkelmann J C
CS Department of Medicine, University of Minnesota, Minneapolis 55455.
NC HL39834 (NHLBI)
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1992 Jul 25) 267 (21) 15205-9.
Journal code: 2985121R. ISSN: 0021-9258.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199208
ED Entered STN: 19920911
Last Updated on STN: 19970203
Entered Medline: 19920826

AB We developed an assay to directly measure the ligand binding properties of the cloned human **erythropoietin receptor** (EpoR). The cDNA encoding the **extracellular domain** of the human EpoR was amplified by polymerase chain reaction and ligated into the prokaryotic expression vector pGEX3X. Synthesis in Escherichia coli was induced and a soluble glutathione S-transferase fusion protein, EREx, was purified by erythropoietin affinity chromatography. Purified EREx was bound to GSH agarose beads and used in a solid phase ligand binding assay. Specific binding of 125I-erythropoietin to EREx beads was demonstrated. A single affinity class (Kd = 1.5 nM) of the binding site was evident on Scatchard analysis. The Kd of this site is quantitatively equivalent to that of the "low" affinity cellular binding site. Kinetic analysis of ligand binding to EREx revealed both the on and off rates to be rapid, with t1/2 of 60 and 40 s, respectively. EREx ligand binding exhibits no obvious metal ion dependence or cross-competition by other hemopoietins. Antibodies to EREx block the binding of erythropoietin to the cellular EpoR. We conclude that the 66-kDa EpoR protein is capable of specific ligand binding and that no covalent modifications or associated molecules are required for this interaction. We speculate that the "high" affinity cellular binding site (Kd less than 0.2 nM) results from the interaction of the EpoR with another molecule, either additional EpoR or associated subunits, that decreases the ligand off rate.

=> d 1-21 bib ab

L4 ANSWER 1 OF 21 MEDLINE DUPLICATE 1
AN 93340191 MEDLINE
DN 93340191 PubMed ID: 8340408
TI Ligand-dependent activation of chimeric receptors with the cytoplasmic domain of the interleukin-3 receptor beta subunit (beta IL3).
AU Sakamaki K; Wang H M; Miyajima I; Kitamura T; Todokoro K; Harada N; Miyajima A
CS Department of Molecular Biology, DNAX Research Institute of Molecular and Cellular Biology, Palo Alto, California 94304.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1993 Jul 25) 268 (21) 15833-9.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199308
ED Entered STN: 19930917
Last Updated on STN: 19980206
Entered Medline: 19930830
AB beta IL3 (formerly known as AIC2A), a beta subunit of the murine interleukin-3 receptor (IL-3R), is not only required for formation of the high affinity receptor but is also important for signal transduction. To examine the function of beta IL3 in signal transduction, we constructed several chimeric receptors consisting of the intracellular portion of beta IL3 and the extracellular portion of other members of the cytokine receptor superfamily, i.e. the human interleukin-2 receptor beta chain (hIL-2R beta), the human interleukin-4 receptor (hIL-4R), and the murine **erythropoietin receptor** (mEpoR). These chimeric receptors and normal cytokine receptors were expressed in an IL-3-dependent murine pro-B cell line, Ba/F3, and an IL-2-dependent murine T cell line, CTLL2. Regardless of the origin of the **extracellular domain**, these chimeric receptors were functional in Ba/F3 cells; they stimulated proliferation and induced tyrosine phosphorylation in response to the cytokine corresponding to the **extracellular domain**. However, the response of transfectants expressing chimeric receptors was similar to, but not identical with, the response of Ba/F3 cells to mIL-3. We present evidence that the IL-4R and EpoR probably have an additional component which is involved in signal transduction.

L4 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
AN 1993:406094 CAPLUS
DN 119:6094
TI A Friend virus mutant that overcomes Fv-2rr host resistance encodes a small glycoprotein that dimerizes, is processed to cell surfaces, and specifically activates erythropoietin receptors
AU Kozak, Susan L.; Hoatlin, Maureen E.; Ferro, Frank E., Jr.; Majumdar, Manas K.; Geib, Roy W.; Fox, Mary T.; Kabat, David
CS Sch. Med., Oregon Health Sci. Univ., Portland, OR, 97201-3098, USA
SO Journal of Virology (1993), 67(5), 2611-20
CODEN: JOVIAM; ISSN: 0022-538X
DT Journal
LA English
AB The env gene of Friend spleen focus-forming virus (SFFV) encodes a membrane glycoprotein (gp55) that is inefficiently (3 to 5%) processed from the rough endoplasmic reticulum to form a larger dimeric plasma membrane deriv. (gp55p). Moreover, the SFFV env glycoprotein assocs. with erythropoietin receptors (EpoR) to cause proliferation of infected erythroblasts (J.-P. Li, et al., 1990). Interestingly, the mitogenic effect of SFFV is blocked in mice homozygous for the Fv-2r resistance gene, but mutant SSFVs can overcome this resistance. Recent evidence

suggested that these mutants contain partial env deletions that truncate the membrane-proximal **extracellular domain** of the encoded glycoproteins (M. H. Majumdar, et al., 1992). Mutant BB6, which encodes a gp42 glycoprotein that has a large deletion in this domain, causes erythroblastosis in DBA/2 (Fv-2s) as well as in congenic D2.R (Fv-2r) mice. Analogous to gp55, gp42 is processed inefficiently as a disulfide-bonded dimer to form cell surface gp42p. Retroviral vectors with SFFV and BB6 env genes have no effect on interleukin 3-dependent BaF3 hematopoietic cells, but they cause growth factor independence of BaF3/EpoR cells, a deriv. that contains recombinant EpoR. After binding 125I-Epo to surface EpoR on these factor-independent cells and adding the covalent crosslinking reagent disuccinimidyl suberate, complexes that had immunol. properties and sizes demonstrating that they consisted of 125I-Epo-gp55p and 125I-Epo-gp42p were isolated from cell lysates. Contrary to a previous report, SFFV or BB6 env glycoproteins did not promiscuously activate other members of the EpoR superfamily. Although the related env glycoproteins encoded by bi-tropic murine leukemia viruses formed detectable complexes with EpoR, strong mitogenic signalling did not ensue. These results indicate that the SFFV and BB6 env glycoproteins specifically activate EpoR; they help to define the glycoprotein properties important for its functions; and they strongly suggest that the Fv-2 leukemia control gene encodes an EpoR-assocd. regulatory factor.

L4 ANSWER 3 OF 21 MEDLINE DUPLICATE 3
AN 94003259 MEDLINE
DN 94003259 PubMed ID: 8400258
TI Serum form of the **erythropoietin receptor** identified by a sequence-specific peptide antibody.
CM Comment in: Blood. 1993 Oct 1;82(7):1945-8
Comment in: Blood. 1996 Oct 15;88(8):3246-7
AU Baynes R D; Reddy G K; Shih Y J; Skikne B S; Cook J D
CS Department of Medicine, Kansas University Medical Center, Kansas City 66160-7402.
SO BLOOD, (1993 Oct 1) 82 (7) 2088-95.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 19980206
Entered Medline: 19931110
AB The present investigation was undertaken to search for soluble forms of the **erythropoietin receptor** in human serum using polyclonal antibody against an amino terminal peptide sequence in the **extracellular domain**. This sequence was located adjacent to the amino terminus at residues 25-38. When this antibody was used for Western blots of solubilized membranes from nucleated bone marrow cells, a protein consistent with native **erythropoietin receptor** was seen. Purified soluble ectodomain of the **erythropoietin receptor** displayed appropriate reactivity with this antibody. When sera from normal subjects and patients with a range of hematologic disorders were examined by Western blotting, a protein with a molecular mass of 34 Kd was detected in sera from patients with enhanced erythropoiesis including sickle cell anemia, thalassemia, and megaloblastic anemia. This protein was rarely detected in normal serum but appeared when normal subjects were treated with recombinant erythropoietin and disappeared after full treatment of patients with megaloblastic anemia due to vitamin B12 deficiency. The protein was not detected after myeloablation for bone marrow transplantation but appeared with marrow engraftment. Reactivity of this protein with the peptide antibody was

competitively inhibited by the amino terminal peptide sequence. An additional 48 Kd protein was detected that showed minimal variation in intensity with differing degrees of erythropoietic activity. Detection of this protein could not be inhibited by the addition of synthetic peptide. Our findings indicate the presence of a soluble form of the **erythropoietin receptor** related to the **extracellular domain** that is highly correlated with enhanced erythropoiesis.

L4 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1993:420668 CAPLUS
DN 119:20668
TI Erythroproietin receptor binds to Friend virus GP55 through other membrane components
AU Kishi, Atsushi; Chiba, Tomoki; Sugiyama, Masahide; Machide, Mitsuru; Nagata, Yuka; Amanuma, Hiroshi; Taira, Hideharu; Katsumata, Teizou; Todokoro, Kazuo
CS Tsukuba Life Sci. Cent., Inst. Phys. Chem. Res., Tsukuba, 305, Japan
SO Biochemical and Biophysical Research Communications (1993), 192(3), 1131-8
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English
AB Direct interactions of Friend spleen focus-forming virus glycoprotein gp55 with either **erythropoietin receptor** (EpoR) or interleukin (IL)2 receptor .beta. chain (IL2R) (but not with IL3 receptor) have been reported to induce factor-independent prolonged proliferation of erythroid or lymphoid cells. In order to clarify the mol. mechanism by which EpoR-gp55 complex transmits an aberrant growth signal in the absence of erythropoietin, various chimeric receptors constituted with IL2R, EpoR, or IL3 receptor were constructed. It was found that coexpression of gp55 and the chimeric receptors contg. the cytoplasmic domains of EpoR and the extracellular domains of IL3 (or IL2) receptor in IL3-dependent Ba/F3 cells results in factor-independent growth. Since gp55 in cell membrane has only a 2 amino acid tail in the cytoplasmic domains and thus cannot interact with EpoR in cytoplasm, the data suggest that gp55 does not bind EpoR directly but interacts with EpoR through third membrane component(s).

L4 ANSWER 5 OF 21 MEDLINE DUPLICATE 4
AN 93173524 MEDLINE
DN 93173524 PubMed ID: 8382360
TI The 'WS motif' common to v-mpl and members of the cytokine receptor superfamily is dispensable for myeloproliferative leukemia virus pathogenicity.
AU Benit L; Charon M; Cocault L; Wendling F; Gisselbrecht S
CS INSERM U363, ICGM, Hopital Cochin, Paris, France.
SO ONCOGENE, (1993 Mar) 8 (3) 787-90.
Journal code: 8711562. ISSN: 0950-9232.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199303
ED Entered STN: 19930402
Last Updated on STN: 19970203
Entered Medline: 19930325
AB Several motifs are conserved in the **extracellular domain** of the cloned chains of the recently described cytokine receptor superfamily. One of them, usually close to the transmembrane region, is the 'WS motif'. Its function remains unknown, but it has been recently shown that the integrity of this motif is essential for interleukin 2 receptor beta-chain and **erythropoietin receptor** activity [Miyazaki, T., Maruyama, M., Yamada, G., Hatakeyama, M. &

Taniguchi, T. (1991). EMBO J., 10, 3191-3197; Watowich, S.S., Yoshimura, A., Longmore, G.D., Hilton, D.J., Hoshimura, Y. & Lodish, H.R. (1992). Proc. Natl. Acad. Sci. USA, 89, 2140-2144]. This WS motif is present in the v-mpl oncogene, which has been transduced in the myeloproliferative leukemia virus (MPLV). v-mpl encodes a truncated transmembrane protein that belongs to this growth factor receptor family. We demonstrate that determinants of MPLV pathogenesis are encoded by the env-mpl fusion gene and that the complete deletion of the WS motif does not abolish MPLV oncogenic properties.

L4 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1993:426363 CAPLUS
DN 119:26363
TI Tyrosine kinase activation through the extracellular domains of cytokine receptors
AU Chiba, Tomoki; Nagata, Yuka; Machide, Mitsuru; Kishi, Atsushi; Amanuma, Hiroshi; Sugiyama, Masahide; Todokoro, Kazuo
CS Tsukuba Life Sci. Cent., Inst. Phys. Chem., Tsukuba, 305, Japan
SO Nature (London, United Kingdom) (1993), 362(6421), 646-8
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA English
AB Interaction of cytokines with their membrane receptors induces the proliferation and differentiation of a specific lineage of hematopoietic progenitors. The mol. mechanism of cytokine receptor-mediated signal transduction is unclear because these receptors do not have tyrosine kinase activity. Interleukin-3 and erythropoietin, however, induce transient tyrosine phosphorylation of a common set of proteins as a growth signal, and interleukin-2 induces phosphorylation of an overlapping but distinct set of proteins. Here it is shown that chimeric receptors consisting of the extracellular domains of the **erythropoietin receptor** and the cytoplasmic domains of the interleukin-2 (or interleukin-3) receptor induce an erythropoietin-dependent tyrosine phosphorylation in interleukin-3-dependent Ba/F3 cells; however, chimeric receptors composed of the extracellular domains of the interleukin-2 receptor and the cytoplasmic domains of the erythropoietin (or interleukin-3) receptor apparently transmit an interleukin-3-dependent signal. Evidently, these cytokines transmit distinct signals for activation of specific tyrosine kinases through the extracellular rather than cytoplasmic domains of the receptors.

L4 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1994:619 CAPLUS
DN 120:619
TI Signal transduction through the receptor for erythropoietin
AU Ihle, James N.; Quelle, Frederick W.; Miura, Osamu
CS Dep. Biochem., St. Jude Child. Res. Hosp., Memphis, TN, 38105, USA
SO Seminars in Immunology (1993), 5(5), 375-89
CODEN: SEIME2; ISSN: 1044-5323
DT Journal; General Review
LA English
AB A review, with 123 refs., on the functional responses of the **erythropoietin receptor**; on mechanisms of **erythropoietin receptor** signal transduction; on the functional responses of the receptors in non-myeloid cells; on the potential protein tyrosine kinases in erythropoietin signaling; on the **extracellular domain** of the **erythropoietin receptor**; on the role of receptor dimerization in function; on the interaction of the receptor with gp55; and on the functional domains within the cytoplasmic domain of the receptor.

L4 ANSWER 8 OF 21 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.

AN 93305128 EMBASE
DN 1993305128
TI The proline-rich motif (PRM): A novel feature of the cytokine/hematopoietin receptor superfamily.
AU O'Neal K.D.; Yu-Lee L.-Y.
CS Department of Medicine, Baylor College of Medicine, One Baylor Plaza,Houston, TX 77030, United States
SO Lymphokine and Cytokine Research, (1993) 12/5 (309-312).
ISSN: 0277-6766 CODEN: LCREEY
CY United States
DT Journal; General Review
FS 026 Immunology, Serology and Transplantation
LA English
SL English
AB Members of the cytokine receptor superfamily have been grouped together by function and by the presence of conserved amino acids in the **extracellular domain**, including four cysteine residues and the Trp-Ser-X-Trp-Ser (WSXWS) motif. However, no consensus sequence motif has been described in the intracellular domain of the cytokine receptors. We now report the presence of a proline-rich consensus sequence motif, eight amino acids in length, which is found in the intracellular domain of all the cytokine receptors. The proline-rich motif (PRM) can be divided into two complementary families that have superimposable consensus sequences. The consensus sequences were found by allowing similar amino acids (aliphatic = Al, aromatic = Ar) to be grouped together. The first motif (PRM1) has the sequence Al-Ar-Pro-X-Al-Pro-X-Pro, while the second (PRM2) is Ar-X-X-X-Al-Pro-X-Pro. An overall consensus sequence for the PRM (PRM1 and PRM2) is derived by allowing aromatic and aliphatic residues to be considered hydrophobic (.PSI.): .PSI.-X-X-X-Al-Pro-X-Pro. Several alternative cytokine receptor isoforms contain two copies of the PRM within the same intracellular domain. The conservation of the proline-rich motif in cytokine receptors suggests that it plays a critical role in receptor function and defines a new feature of the cytokine receptor superfamily.

L4 ANSWER 9 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1994:93752 BIOSIS
DN PREV199497106752
TI Biochemical studies on the **extracellular domain** of the human **erythropoietin receptor**.
AU Jones, S. S. (1); Yet, M.-G.; Chin, C. C. Q.
CS (1) Genetics Inst. Inc., 87 Cambridge Park Dr., Cambridge, MA USA
SO Blood, (1993) Vol. 82, No. 10 SUPPL. 1, pp. 228A.
Meeting Info.: Thirty-fifth Annual Meeting of the American Society of Hematology St. Louis, Missouri, USA December 3-7, 1993
ISSN: 0006-4971.
DT Conference
LA English

L4 ANSWER 10 OF 21 MEDLINE DUPLICATE 5
AN 94028971 MEDLINE
DN 94028971 PubMed ID: 8215404
TI Dimer- and oligomerization of the **erythropoietin receptor** by disulfide bond formation and significance of the region near the WSXWS motif in intracellular transport.
AU Miura O; Ihle J N
CS Department of Biochemistry, St. Jude Children's Research Hospital, Memphis, Tennessee 38101.
NC P30 CA21765 (NCI)
SO ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (1993 Oct) 306 (1) 200-8.
Journal code: 0372430. ISSN: 0003-9861.
CY United States

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 19940117
Entered Medline: 19931102
AB The receptor for erythropoietin (EpoR), a primary regulator of erythropoiesis, belongs to the cytokine receptor family. Although the mechanisms of signal transduction through the receptors of this family are largely unknown, increasing numbers of the receptors have been shown to form a hetero- or homodimer. To address the possibility that the EpoR dimerizes, we made a truncated mutant receptor that lacks most of the cytoplasmic domain and expressed it either alone or with the wild-type receptor in an IL-3-dependent cell line, DA-3. Dimerization of the receptor was demonstrated by a coimmunoprecipitation using an antiserum against the cytoplasmic domain of the receptor. Epo stimulation did not have a detectable effect on dimerization. Coimmunoprecipitation experiments in COS-7 cells further revealed that only the **extracellular domain** of the receptor is required for dimerization. The "WSXWS" motif, conserved in the cytokine receptor family, was shown to not be required for dimerization. Diagonal two-dimensional gel analysis of the EpoR expressed in DA-3 transfectants showed that a substantial portion of the receptor forms dimers or oligomers with disulfide bonds. Western blot analysis, using an antiphosphotyrosine antibody, revealed that a portion of these dimers or oligomers become tyrosine phosphorylated after Epo stimulation, thus suggesting that these forms are expressed on the cell surface and activated by Epo stimulation.

L4 ANSWER 11 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1993:292774 BIOSIS
DN PREV199345010899
TI Ligand-dependent dimerization of recombinant human **erythropoietin receptor extracellular domain**.
AU Harris, Kevin W.; Winkelmann, John C.
CS Dep. Med., Inst. Human Genetics, University Minnesota, Minneapolis, MN USA
SO Clinical Research, (1993) Vol. 41, No. 2, pp. 134A.
Meeting Info.: Joint Meeting of the Association of American Physicians, the American Society for Clinical Investigation, and the American Federation for Clinical Research Washington, DC, USA April 30-May 3, 1993
ISSN: 0009-9279.
DT Conference
LA English

L4 ANSWER 12 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1993:286028 BIOSIS
DN PREV199345004153
TI Random mutagenesis of the **extracellular domain** of the human **erythropoietin receptor**.
AU Barbone, Francis P.; Jolliffe, Linda K.; Mulcahy, Linda S.
CS R. W. JOHNSON Pharm. Res. Inst., Raritan, NJ 08869 USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART B, pp. 72.
Meeting Info.: Keystone Symposium on Cytokines and Cytokine Receptors: From Cloning to the Clinic Keystone, Colorado, USA January 31-February 7, 1993
ISSN: 0733-1959.
DT Conference
LA English

L4 ANSWER 13 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1993:200416 BIOSIS
DN PREV199344096666
TI Purification of an active form of the **extracellular domain** of the human **erythropoietin receptor** and isolation of an EPO-soluble receptor complex.
AU Johnson, Dana L.; Middleton, Steven A.; McMahon, Frank J.; Kroon, Daniel; Tsao, Eric; Mulcahy, Linda S.; Jolliffe, Linda K.
CS R. W. Johnson Pharm. Res. Inst., Dep. Mol. Cell. Biol., Route 202, Box 300, Raritan, NJ 08869 USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART A, pp. 47.
Meeting Info.: Keystone Symposium on Protein Purification and Biochemical Engineering Santa Fe, New Mexico, USA January 15-21, 1993
ISSN: 0733-1959.
DT Conference
LA English

L4 ANSWER 14 OF 21 MEDLINE DUPLICATE 6
AN 92340575 MEDLINE
DN 92340575 PubMed ID: 1321832
TI Ligand binding properties of the human **erythropoietin receptor extracellular domain** expressed in Escherichia coli.
AU Harris K W; Mitchell R A; Winkelmann J C
CS Department of Medicine, University of Minnesota, Minneapolis 55455.
NC HL39834 (NHLBI)
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1992 Jul 25) 267 (21) 15205-9.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199208
ED Entered STN: 19920911
Last Updated on STN: 19970203
Entered Medline: 19920826
AB We developed an assay to directly measure the ligand binding properties of the cloned human **erythropoietin receptor** (EpoR). The cDNA encoding the **extracellular domain** of the human EpoR was amplified by polymerase chain reaction and ligated into the prokaryotic expression vector pGEX3X. Synthesis in Escherichia coli was induced and a soluble glutathione S-transferase fusion protein, EREx, was purified by erythropoietin affinity chromatography. Purified EREx was bound to GSH agarose beads and used in a solid phase ligand binding assay. Specific binding of 125I-erythropoietin to EREx beads was demonstrated. A single affinity class (Kd = 1.5 nM) of the binding site was evident on Scatchard analysis. The Kd of this site is quantitatively equivalent to that of the "low" affinity cellular binding site. Kinetic analysis of ligand binding to EREx revealed both the on and off rates to be rapid, with t1/2 of 60 and 40 s, respectively. EREx ligand binding exhibits no obvious metal ion dependence or cross-competition by other hemopoietins. Antibodies to EREx block the binding of erythropoietin to the cellular EpoR. We conclude that the 66-kDa EpoR protein is capable of specific ligand binding and that no covalent modifications or associated molecules are required for this interaction. We speculate that the "high" affinity cellular binding site (Kd less than 0.2 nM) results from the interaction of the EpoR with another molecule, either additional EpoR or associated subunits, that decreases the ligand off rate.

L4 ANSWER 15 OF 21 MEDLINE DUPLICATE 7
AN 92260637 MEDLINE
DN 92260637 PubMed ID: 1583724

TI Mutations in the env gene of friend spleen focus-forming virus overcome Fv-2r-mediated resistance to Friend virus-induced erythroleukemia.
AU Majumdar M K; Cho C L; Fox M T; Eckner K L; Kozak S; Kabat D; Geib R W
CS Department of Life Sciences, Indiana State University, Terre Haute.
NC CA22810 (NCI)
CA47944 (NCI)
SO JOURNAL OF VIROLOGY, (1992 Jun) 66 (6) 3652-60.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
OS GENBANK-M90673
EM 199206
ED Entered STN: 19920626
Last Updated on STN: 19970203
Entered Medline: 19920616
AB Although Fv-2r homozygous mice are resistant to leukemias induced either by an erythropoietin-encoding virus or by wild-type Friend virus (FV) (M. E. Hoatlin, S. L. Kozak, F. Lilly, A. Chakraborti, C. A. Kozak, and D. Kabat, Proc. Natl. Acad. Sci. USA 87:9985-9989, 1990), they are susceptible to some variants of FV (R. A. Steeves, E. A. Mirand, A. Bulba, and P. J. Trudel, Int. J. Cancer 5:349-356, 1970; R. W. Geib, M. B. Seaward, M. L. Stevens, C.-L. Cho, and M. Majumdar, Virus Res. 14:161-174, 1989). To localize the virus gene involved in influencing the host range, we cloned and sequenced the env gene of the BB6 variant of FV (Steeves et al., Int. J. Cancer 5:349-356, 1970). In comparison with the wild-type env gene, the BB6 variant contains a 159-bp deletion that eliminates the membrane-proximal portion of the **extracellular domain** and 58 point mutations resulting in 13 amino acid changes. Substitution of the variant env gene for the wild-type env gene resulted in a recombinant virus that produced a Friend virus-like disease in Fv-2r homozygotes. Our results identify the spleen focus-forming virus env gene as the viral gene involved in this virus-host interaction. Additionally, they suggest that the product of the Fv-2r gene modifies the interaction between the spleen focus-forming virus envelope protein and the **erythropoietin receptor**.

L4 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1992:248674 CAPLUS
DN 116:248674
TI Tryptophan residue of Trp-Ser-X-Trp-Ser motif in extracellular domains of **erythropoietin receptor** is essential for signal transduction
AU Chiba, Tomoki; Amanuma, Hiroshi; Todokoro, Kazuo
CS Tsukuba Life Sci. Cent., Inst. Phys. Chem. Res., Tsukuba, 305, Japan
SO Biochemical and Biophysical Research Communications (1992), 184(1), 485-90
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English
AB The Trp-Ser-X-Trp-Ser motif commonly exists just outside the transmembrane domains of all cytokine receptors so far isolated. The role of this conserved motif in **erythropoietin receptor** was examd. by assessing a series of mutant receptors on erythropoietin-induced signal transduction. Replacement of one of the two conserved Trp residues in the motif to Gly was found to completely abolish the binding of erythropoietin to the receptor and also to lose the ability to transduce the factor-dependent growth signal. While the mutants with one Ser residue converted to Gly or Ala retained full biol. activities, the replacement of both conserved Ser residues diminished the functions of the receptor. Furthermore, the receptors lacking a part or all of the Trp-Ser-X-Trp-Ser motif did not respond to erythropoietin. The Trp-Ser-X-Trp-Ser motif,

esp. Trp residue, located in extracellular domains of the **erythropoietin receptor** thus appears to play a crit. role in receptor-mediated signal transduction.

L4 ANSWER 17 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1991:519614 BIOSIS
DN BR41:120329
TI LIGAND BINDING PROPERTIES OF THE HUMAN **ERYTHROPOIETIN RECEPTOR EXTRACELLULAR DOMAIN** EXPRESSED IN ESCHERICHIA-COLI.
AU HARRIS K W; MITCHEL R A; WINKELMANN J C
CS DEP. MED., UNIV. MINN., MINNEAPOLIS, MINN.
SO JOINT MEETING OF THE CENTRAL SOCIETY FOR CLINICAL RESEARCH, MIDWEST SECTION AMERICAN FEDERATION FOR CLINICAL RESEARCH, MIDWEST SOCIETY FOR PEDIATRIC RESEARCH AND CENTRAL REGION SOCIETY FOR INVESTIGATIVE DERMATOLOGY, CHICAGO, ILLINOIS, USA, NOVEMBER 6-8, 1991. CLIN RES. (1991) 39 (3), 724A.
CODEN: CLREAS. ISSN: 0009-9279.
DT Conference
FS BR; OLD
LA English

L4 ANSWER 18 OF 21 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 91268866 EMBASE
DN 1991268866
TI The cytokine receptor superfamily.
AU Kaczmarski R.S.; Mufti G.J.
CS Department of Haematological Medicine, King's College School of Medicine and Dentistry, Bessemer Road, London SE5 9PJ, United Kingdom
SO Blood Reviews, (1991) 5/3 (193-203).
ISSN: 0268-960X CODEN: BLOREB
CY United Kingdom
DT Journal; General Review
FS 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
LA English
SL English
AB The binding of haemopoietic growth factors and cytokines to specific receptors triggers a cascade of intracellular events which results in cell proliferation and differentiation. The knowledge of ligand-receptor-signal pathways is not only important in understanding the pathophysiology of malignant disease but also essential for devising future therapeutic strategies. The advent of recombinant technology has made it possible to test the efficacy of selective differentiation therapy, and haemopoietic growth factors are undergoing clinical trials for a number of indications. In addition, increasingly the receptors for haemopoietic growth factors and cytokines have come under scientific scrutiny. Recently receptors for IL-2.alpha., IL-2B, IL-3, IL-4, IL-5, IL-6, IL-7, erythropoietin, G-CSF and GM-CSF have been isolated and cloned. It has become apparent that they have structural homology that is shared by receptors for growth hormone and prolactin, and this receptor group makes up the new cytokine receptor superfamily. The finding of sequence homology within these receptors suggests their evolutionary relationship. These receptors are transmembrane proteins 257-856 amino acids and their extracellular ligand-binding domain contains four conserved cysteine residues and a Trp-Ser-X-Trp-Ser motif. The secondary structure of the **extracellular domain** is made up of .alpha.-helices. High and low affinity binding forms exist for all these receptors. Binding affinity may depend on the formation of receptor heterodimers or multimers, association with other membrane proteins or differential glycosylation. Soluble receptor forms have been described for IL-2.alpha., IL-4, IL-5, IL-6 and IL-7. It is not known whether they are actively

secreted or represent the degradation products of cell turnover. Their function may be to mop up excess cytokines and thereby confine the cytokine response. There is no sequence homology of the intracytoplasmic domains although several are rich in proline and serine residues, which may be important in mechanisms of signal transduction. No receptor in this superfamily functions as a receptor tyrosine kinase or has intrinsic protein tryosine kinase activity. Detailed study of individual receptors holds clues to the regulation of receptor expression, ligand-receptor interactions and mechanisms involved in signal transduction. Such knowledge might explain the pleotropic effects cytokines may have on different cell types and their overlap in biological functions. Elevated levels of soluble IL-2.alpha. receptor (Tac) are detected in hairy cell leukaemia, lymphomas and adult T-cell leukaemia (TL), and levels reflect tumour burden. Other soluble receptors (eg IL-6 receptor in multiple myeloma) may also prove to be useful in this way. As growth factor therapy is becoming a part of cancer treatment, a knowledge of growth factor receptor distribution and expression by malignant cells may guide as to the appropriate choice of growth factors, avoiding those that may cause proliferation of the malignant clone. Where proliferation of the malignant clone is dependant on autocrine or paracrine growth factor secretion, anti-receptor therapies may be used to block the response. Similarly, soluble receptors, incapable of signal transduction might be used to prevent the action of a cytokine. A further understanding of the cytokine-receptor-signal pathway will increase our understanding of the pathogenesis of cancer and manipulation of this axis has prospects for new cancer therapies.

L4 ANSWER 19 OF 21 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 91174687 EMBASE
DN 1991174687
TI The growth hormone binding protein as a paradigm of the erythropoietin superfamily of receptors.
AU Hochberg Z.; Amit T.; Youdim M.B.H.
CS Department of Pharmacology, Rappaport Family Institute, Research in Medical Sciences,Haifa, Israel
SO Cellular Signalling, (1991) 3/2 (85-91).
ISSN: 0898-6568 CODEN: CESIEY
CY United Kingdom
DT Journal; (Short Survey)
FS 003 Endocrinology
030 Pharmacology
037 Drug Literature Index
LA English
SL English
AB The growth hormone (GH) receptor belongs to a novel receptor family which shares significant amino-acid sequence homology and includes prolactin receptors, erythropoietin receptors and several cytokines' receptors. GH and three other members of this family of receptors have been shown to have circulating soluble forms. The present review summarizes our knowledge on receptor related binding proteins, discusses their possible biological effects and suggests their use in novel assays for their ligands. The GH-binding protein (GH-BP) was the first to have been described and is used as a model for the concept. A series of indirect pieces of evidence suggest that the measurement of circulating GH-BP may enable an evaluation of the GH-receptor. When covalently bound to GH, GH-BP has been shown to slow the clearance of GH. On the other hand GH-BP competes with the GH-receptor for GH binding and, thus, diminishes the biological effect of GH. We suggest a biological role for GH-BP as follows: an increase in the availability of GH results not only in the up-regulation of the GH-receptor but also in increased turnover of this receptor, its internalization and recycling. This is followed by a concomitant increase in GH-BP which, in turn, mitigates the effect of GH

by competing with the receptor on GH binding. The **extracellular domain** of the GH-receptor is homologous, to a large extent, with the sequences of several receptors for hormones and cytokines, which have recently been cloned. Comparing their sequences with a library of consensus sequences, it was found that the C terminal part of the extracellular domains of the new receptor family contains a domain found in several proteins mediating protein-protein interactions. The functional significance of the soluble circulating forms of this new receptor family has yet to be studied. The availability of soluble forms of receptor (binding proteins) may unveil a family of novel assays for hormones and cytokines. A binding protein based assay will use the advantages and egest the disadvantages of the RIA and RRA.

L4 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1990:513490 CAPLUS
DN 113:113490
TI Human interleukin 4 receptor confers biological responsiveness and defines a novel receptor superfamily
AU Idzerda, Rejean L.; March, Carl J.; Mosley, Bruce; Lyman, Stewart D.; Vanden Bos, Tim; Gimpel, Steven D.; Din, Wenie S.; Grabstein, Kenneth H.; Widmer, Michael B.; et al.
CS Immunex Corp., Seattle, WA, 98101, USA
SO Journal of Experimental Medicine (1990), 171(3), 861-73
CODEN: JEMEAV; ISSN: 0022-1007
DT Journal
LA English
AB IL-4, a pleiotropic cytokine produced by T lymphocytes, plays an important role in immune responsiveness by regulating proliferation and differentiation of a variety of lymphoid and myeloid cells via binding to high affinity receptors. The authors isolated and studied functional expression of a human IL-4-R cDNA. When transfected into COS-7 cells, the cDNA encodes a 140-kD cell-surface protein. After transfection into a murine T cell line, the cDNA encodes a protein that binds human IL-4 with high affinity and can confer responsiveness to human IL-4. The predicted **extracellular domain** of the IL-4-R exhibits significant amino acid sequence homol. with the .beta. subunit of the IL-2-R (p75), and the receptors for IL-6, erythropoietin, and prolactin. These receptors comprise a novel superfamily with extracellular domains characterized by four conserved cysteine residues and a double tryptophan-serine motif located proximal to the transmembrane region.

L4 ANSWER 21 OF 21 MEDLINE DUPLICATE 8
AN 90138976 MEDLINE
DN 90138976 PubMed ID: 2405398
TI Expression cloning of a cDNA encoding the murine interleukin 4 receptor based on ligand binding.
AU Harada N; Castle B E; Gorman D M; Itoh N; Schreurs J; Barrett R L; Howard M; Miyajima A
CS Department of Immunology, DNAX Research Institute of Molecular and Cellular Biology, Palo Alto, CA 94304.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1990 Feb) 87 (3) 857-61.
Journal code: 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-M29854
EM 199003
ED Entered STN: 19900328
Last Updated on STN: 19980206
Entered Medline: 19900314

AB Interleukin 4 (IL-4) is a potent mediator of growth and differentiation for various lymphoid and myeloid cells. To isolate a cDNA encoding the murine IL-4 receptor, we have developed an expression cloning method that uses biotinylated ligand as a probe and that may be generally applicable to cloning of receptor genes. COS-7 cells transiently transfected with the cloned full-length cDNA bind murine IL-4 specifically with a Kd = 165 pM. Crosslinking of 125I-labeled IL-4 to COS-7 cells transfected with the cDNA reveals binding to proteins of 120-140 kDa. IL-4-responsive cells also express IL-4-binding proteins of 120-140 kDa but show additional bands at 60-70 kDa; the relationship of the smaller proteins to the larger ones is unclear. The nucleotide sequence indicates that the full-length cDNA encodes 810 amino acids including the signal sequence. While no consensus sequence for protein kinases is present in the cytoplasmic domain, a sequence comparison with the **erythropoietin receptor,** the IL-6 receptor, and the beta chain of the IL-2 receptor reveals a significant homology in the **extracellular domain,** indicating that the IL-4 receptor is a member of a cytokine receptor family.

Takatsuki K
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1987 Jul 15) 146 (1) 7-12.
Journal code: 0372516. ISSN: 0006-291X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198708
ED Entered STN: 19900305
Last Updated on STN: 19970203
Entered Medline: 19870827

L5 ANSWER 34 OF 34 MEDLINE on STN DUPLICATE 19
AN 86215056 MEDLINE
DN 86215056 PubMed ID: 2939827
TI Metabolic and functional consequences of introducing inositol 1,4,5-trisphosphate into saponin-permeabilized human platelets.
AU Authi K S; Evenden B J; Crawford N
SO BIOCHEMICAL JOURNAL, (1986 Feb 1) 233 (3) 707-18.
Journal code: 2984726R. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198605
ED Entered STN: 19900321
Last Updated on STN: 19900321
Entered Medline: 19860530

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L5 ANSWER 3 OF 34 MEDLINE on STN DUPLICATE 1
AN 94003259 MEDLINE
DN 94003259 PubMed ID: 8400258
TI Serum form of the **erythropoietin receptor** identified by a sequence-specific peptide antibody.
CM Comment in: Blood. 1993 Oct 1;82(7):1945-8
Comment in: Blood. 1996 Oct 15;88(8):3246-7
AU Baynes R D; Reddy G K; Shih Y J; Skikne B S; Cook J D
CS Department of Medicine, Kansas University Medical Center, Kansas City 66160-7402.
SO BLOOD, (1993 Oct 1) 82 (7) 2088-95.
Journal code: 7603509. ISSN: 0006-4971.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 19980206
Entered Medline: 19931110
AB The present investigation was undertaken to search for **soluble** forms of the **erythropoietin receptor** in human serum using polyclonal antibody against an amino terminal peptide sequence in the extracellular domain. This sequence was located adjacent to the amino terminus at residues 25-38. When this antibody was used for Western blots of solubilized membranes from nucleated bone marrow cells, a protein consistent with native **erythropoietin receptor** was seen. Purified **soluble** ectodomain of the **erythropoietin receptor** displayed appropriate reactivity with this antibody. When sera from normal subjects and patients with a range of hematologic disorders were examined by Western blotting, a protein with a molecular mass of 34 Kd was detected in sera from patients with enhanced erythropoiesis including sickle cell anemia, thalassemia, and megaloblastic anemia. This protein was rarely detected in normal serum but appeared when normal subjects were treated with recombinant **erythropoietin** and disappeared after full treatment of patients with megaloblastic anemia due to vitamin B12 deficiency. The protein was not detected after myeloablation for bone marrow transplantation but appeared with marrow engraftment. Reactivity of this protein with the peptide antibody was competitively inhibited by the amino terminal peptide sequence. An additional 48 Kd protein was detected that showed minimal variation in intensity with differing degrees of erythropoietic activity. Detection of this protein could not be inhibited by the addition of synthetic peptide. Our findings indicate the presence of a **soluble** form of the **erythropoietin receptor** related to the extracellular domain that is highly correlated with enhanced erythropoiesis.

L5 ANSWER 5 OF 34 MEDLINE on STN DUPLICATE 2
AN 93152837 MEDLINE
DN 93152837 PubMed ID: 7678997
TI Human **erythropoietin**-specific sites of monoclonal antibody-mediated neutralization.
AU Fibi M R; Aslan M; Hintz-Obertreis P; Pauly J U; Gerken M; Luben G; Lauffer L; Siebold B; Stuber W; Nau G; +
CS Department of Preclinical Development of Therapeutics, BEHRINGWERKE AG, Marburg, Germany.
SO BLOOD, (1993 Feb 1) 81 (3) 670-5.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199303
ED Entered STN: 19930326
Last Updated on STN: 19960129
Entered Medline: 19930310
AB Recombinant human **erythropoietin** (rhuEpo)-specific mouse monoclonal antibodies (MoAbs) have been produced and characterized. All antibodies were specifically reactive with rhuEpo in enzyme-linked immunosorbent assay (ELISA). Epitope exclusion studies showed three distinct epitope regions, A, B, and C, recognized by neutralizing MoAbs. An additional epitope region D was recognized by non-neutralizing MoAbs. Antibodies defining an epitope region competed with each other for binding

sites, but did not compete with antibodies defining a different epitope region. Group B antibodies were able to compete for the **receptor** binding site on rhuEpo with a **soluble** human **Epo-receptor**-Ig fusion protein. No single peptide sequences were found to specifically interact either with group B MoAbs or with the rhuEpo-**receptor**. Therefore, it is suggested that epitope region B and the **receptor** binding site share binding determinants that are primarily composed of conformational epitopes. Because group A and group C antibodies did not compete with the **receptor** for binding to the **receptor** binding site of the rhuEpo molecule, it is suggested that neutralization via epitope regions A and C is mediated through binding inhibition caused by conformational changes, transmuting the binding site(s) for the **receptor**. Conversely, binding to the **receptor** seems to induce conformational changes in the hormone molecule, eliminating epitopes for group A and C antibodies.

L5 ANSWER 9 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1994:93753 BIOSIS
DN PREV199497106753
TI The putative **soluble** form of the **erythropoietin receptor** (EpoR) does not bind **erythropoietin** (**Epo**).
AU Schimmenti, Lisa A. [Reprint author]; Blechert, Gwendolyn L.; Harris, Kevin W.; Winkelmann, John C.
CS Dep. Med., Inst. Human Genetics, Univ. Minn., Minneapolis, MN, USA
SO Blood, (1993) Vol. 82, No. 10 SUPPL. 1, pp. 228A.
Meeting Info.: Thirty-fifth Annual Meeting of the American Society of Hematology. St. Louis, Missouri, USA. December 3-7, 1993.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 5 Mar 1994
Last Updated on STN: 5 Mar 1994

L5 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1994:555793 CAPLUS
DN 121:155793
TI Production and characterization of recombinant **soluble** form **erythropoietin receptor**
AU Nagao, Masaya; Masuda, Seiji; Abe, Satoshi; Ueda, Masatsugu; Sasaki, Ryuzo
CS Fac. Agric., Kyoto Univ., Kyoto, 606, Japan
SO Anim. Cell Technol.: Basic Appl. Aspects, Proc. Int. Meet. Jpn. Assoc. Anim. Cell Technol., 5th (1993), Meeting Date 1992, 71-7. Editor(s): Kaminogawa, Shuichi; Ametani, Akio; Hachimura, Satoshi. Publisher: Kluwer, Dordrecht, Neth.
CODEN: 60AEAM
DT Conference
LA English
AB A recombinant sol. form (sEPO-R) of **erythropoietin** (**EPO**) **receptor** (**EPO**-R) was produced by Chinese hamster ovary cells. One subclone, N14.2 could produce sEPO-R more than 40.mu.g/106cells/day maximally. SEPO-R was isolated easily with **EPO** fixed gel in a high yield. Affinity of sEPO-R to **EPO** was detd. by pptg. sEPO-R.radiolabeled **EPO** complex using anti **EPO**-R antibody and polyethylene glycol. The results showed a Kd of 13 nM which was much lower than those for cellular **EPO**-R. One N-glycosylation site exists in sEPO-R but the glycosylation did not affect the binding affinity to **EPO**. A complex with a mol. size that corresponded to a 1:1 complex of **EPO** and sEPO-R was detected by gel filtration anal.

L5 ANSWER 13 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:200416 BIOSIS
DN PREV199344096666
TI Purification of an active form of the extracellular domain of the human **erythropoietin receptor** and isolation of an **EPO -soluble receptor** complex.
AU Johnson, Dana L.; Middleton, Steven A.; McMahon, Frank J.; Kroon, Daniel; Tsao, Eric; Mulcahy, Linda S.; Jolliffe, Linda K.
CS R. W. Johnson Pharm. Res. Inst., Dep. Mol. Cell. Biol., Route 202, Box 300, Raritan, NJ 08869, USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART A, pp. 47.
Meeting Info.: Keystone Symposium on Protein Purification and Biochemical Engineering. Santa Fe, New Mexico, USA. January 15-21, 1993.
ISSN: 0733-1959.
DT Conference; (Meeting)
LA English
ED Entered STN: 16 Apr 1993
Last Updated on STN: 17 Apr 1993

L5 ANSWER 17 OF 34 MEDLINE on STN DUPLICATE 6
AN 93075178 MEDLINE
DN 93075178 PubMed ID: 1445329
TI Production and ligand-binding characteristics of the **soluble** form of murine **erythropoietin receptor**.
AU Nagao M; Masuda S; Abe S; Ueda M; Sasaki R
CS Department of Food Science and Technology, Faculty of Agriculture, Kyoto University, Japan.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1992 Oct 30) 188 (2) 888-97.
Journal code: 0372516. ISSN: 0006-291X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199212
ED Entered STN: 19930122
Last Updated on STN: 19970203
Entered Medline: 19921204
AB A recombinant **soluble** form (sEPO-R) of **erythropoietin** (**EPO**) **receptor** (**EPO**-R) was produced by Chinese hamster ovary cells and isolated in high yield with the **EPO**-fixed gel. Ligand binding assays were done using three methods; precipitation of sEPO-R radiolabeled **EPO** complex and competition of sEPO-R for the binding of radiolabeled **EPO** with the cellular **EPO**-R. The results showed a Kd of 17 nM which was much lower than those for cellular **EPO**-R. One N-glycosylation site exists in sEPO-R but the glycosylation did not affect the binding affinity to **EPO**. A complex with a molecular size that corresponded to a 1:1 complex of **EPO** and sEPO-R was detected.

L5 ANSWER 19 OF 34 MEDLINE on STN DUPLICATE 8
AN 93085165 MEDLINE
DN 93085165 PubMed ID: 1453011
TI The human **erythropoietin receptor**.
AU Winkelmann J C
CS Department of Medicine, University of Minnesota Medical School, Minneapolis.
NC R01DK44134 (NIDDK)
SO INTERNATIONAL JOURNAL OF CELL CLONING, (1992 Sep) 10 (5) 254-61. Ref: 52
Journal code: 8308172. ISSN: 0737-1454.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199301
ED Entered STN: 19930129
Last Updated on STN: 19930129
Entered Medline: 19930106
AB Molecular analysis of the human **erythropoietin receptor** (EpoR) promises to yield a greater mechanistic understanding of erythropoiesis and disease states that affect red cell production. The cloned **receptor** molecule is a 66 kDa membrane protein that is structurally related to a large superfamily of haemopoietin/growth factor **receptors**. The 66 kDa EpoR alone is capable of binding to **erythropoietin** (**Epo**) with nanomolar affinity. The native EpoR may form dimers before or after binding **Epo**. EpoR dimers and/or associated molecules are probably necessary for high-affinity **Epo** binding. The 66 kDa EpoR probably exists as a protein complex with as yet unidentified proteins of 100 and 85 kDa. The molecular mechanism of **Epo** signal transduction remains largely undefined. The possible role of the EpoR in human diseases has been studied in a variety of clinical conditions. A structurally abnormal EpoR gene has been identified in a human erythroleukemia cell line. In polycythemia vera, red cell progenitors exhibit exaggerated sensitivity to **Epo** and express only low-affinity EpoR. Some cases of hereditary polycythemia may be due to a mutant EpoR conferring enhanced **Epo** sensitivity. Other pathologic conditions may also be associated with abnormalities of the EpoR or its associated molecules. **Soluble**, immunoreactive EpoR is detectable in human serum, but its physiological significance is unknown.

L5 ANSWER 30 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1991:516764 BIOSIS
DN PREV199141117479; BR41:117479
TI PURIFICATION AND CHARACTERIZATION OF A **SOLUBLE** FORM OF THE MURINE **ERYTHROPOIETIN RECEPTOR**.
AU JOHNSON D L [Reprint author]; MULCAHY L J; AGARWAL M; PELLEGRINO J L; JOLLIFFE L K
CS RW JOHNSON PHARM RES INST, ROUTE 202, BOX 300, RARITAN, NJ 08876, USA
SO Abstracts of Papers American Chemical Society, (1991) Vol. 202, No. 1-2, pp. BIOL 108.
Meeting Info.: FOURTH CHEMICAL CONGRESS OF NORTH AMERICA, NEW YORK, NEW YORK, USA, AUGUST 25-30, 1991. ABSTR PAP AM CHEM SOC.
CODEN: ACSRAL. ISSN: 0065-7727.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 14 Nov 1991
Last Updated on STN: 8 Jan 1992

L5 ANSWER 1 OF 34 MEDLINE on STN
AN 94018235 MEDLINE
DN 94018235 PubMed ID: 8105293
TI **Soluble** transferrin **receptor** in beta-thalassaemia.
AU Musto P; Lombardi G; Centra M; Modoni S; Carotenuto M; Di Giorgio G
SO LANCET, (1993 Oct 23) 342 (8878) 1058.
Journal code: 2985213R. ISSN: 0140-6736.
CY ENGLAND: United Kingdom
DT Letter
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 19950206
Entered Medline: 19931118

L5 ANSWER 2 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:361933 BIOSIS
DN PREV199396047608
TI Phosphatidylinositol 3-kinase associates, via its Src homology 2 domains, with the activated **erythropoietin receptor**.
AU Damen, Jacqueline E.; Mui, Alice L.-F.; Puil, Lorri; Pawson, Tony; Krystal, Gerald [Reprint author]
CS Terry Fox Lab., B.C. Cancer Res. Centre, 601 W 10th Ave., Vancouver, BC V5Z 1L3, Canada
SO Blood, (1993) Vol. 81, No. 12, pp. 3204-3210.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Article
LA English
ED Entered STN: 6 Aug 1993
Last Updated on STN: 8 Aug 1993

L5 ANSWER 3 OF 34 MEDLINE on STN DUPLICATE 1
AN 94003259 MEDLINE
DN 94003259 PubMed ID: 8400258
TI Serum form of the **erythropoietin receptor** identified by a sequence-specific peptide antibody.
CM Comment in: Blood. 1993 Oct 1;82(7):1945-8
Comment in: Blood. 1996 Oct 15;88(8):3246-7
AU Baynes R D; Reddy G K; Shih Y J; Skikne B S; Cook J D
CS Department of Medicine, Kansas University Medical Center, Kansas City 66160-7402.
SO BLOOD, (1993 Oct 1) 82 (7) 2088-95.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 19980206
Entered Medline: 19931110

L5 ANSWER 4 OF 34 MEDLINE on STN
AN 94009450 MEDLINE
DN 94009450 PubMed ID: 7691640
TI Increase in peripheral blood megakaryocyte progenitors following cancer therapy with high-dose cyclophosphamide and hematopoietic growth factors.
AU Siena S; Bregni M; Bonsi L; Sklenar I; Bagnara G P; Bonadonna G; Gianni A M
CS Cristina Gandini Unit, Istituto Nazionale Tumori, Milan, Italy.
SO EXPERIMENTAL HEMATOLOGY, (1993 Nov) 21 (12) 1583-90.

Journal code: 0402313. ISSN: 0301-472X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 20000303
Entered Medline: 19931124

L5 ANSWER 5 OF 34 MEDLINE on STN DUPLICATE 2
AN 93152837 MEDLINE
DN 93152837 PubMed ID: 7678997
TI Human **erythropoietin**-specific sites of monoclonal antibody-mediated neutralization.
AU Fibi M R; Aslan M; Hintz-Obertreis P; Pauly J U; Gerken M; Luben G; Lauffer L; Siebold B; Stuber W; Nau G; +
CS Department of Preclinical Development of Therapeutics, BEHRINGWERKE AG, Marburg, Germany.
SO BLOOD, (1993 Feb 1) 81 (3) 670-5.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199303
ED Entered STN: 19930326
Last Updated on STN: 19960129
Entered Medline: 19930310

L5 ANSWER 6 OF 34 MEDLINE on STN
AN 93353738 MEDLINE
DN 93353738 PubMed ID: 8350497
TI Basis of cytokines--history and present status.
AU Niho Y; Akashi K; Hayashida K
CS 1st Department of Internal Medicine, Kyushu University, Fukuoka.
SO RINSHO BYORI. JAPANESE JOURNAL OF CLINICAL PATHOLOGY, (1993 Apr) 41 (4) 355-60. Ref: 12
Journal code: 2984781R. ISSN: 0047-1860.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA Japanese
FS Priority Journals
EM 199309
ED Entered STN: 19931001
Last Updated on STN: 19931001
Entered Medline: 19930910

L5 ANSWER 7 OF 34 MEDLINE on STN
AN 93330806 MEDLINE
DN 93330806 PubMed ID: 7687773
TI Paracrine and autocrine growth mechanisms of human stem cell factor (c-kit ligand) in myeloid leukemia.
AU Pietsch T
CS Institute of Neuropathology, University of Bonn, Germany.
SO NOUVELLE REVUE FRANCAISE D HEMATOLOGIE, (1993 Jun) 35 (3) 285-6.
Journal code: 7909092.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English

FS Priority Journals
EM 199308
ED Entered STN: 19930903
Last Updated on STN: 20000303
Entered Medline: 19930826

L5 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1993:447411 CAPLUS
DN 119:47411
TI Production of **erythropoietin** and its **soluble**-type **receptors**
AU Sasaki, Ryuzo; Nagao, Masaya
CS Fac. Agric., Kyoto Univ., Kyoto, 606, Japan
SO Kagaku to Seibutsu (1993), 31(4), 270-4
CODEN: KASEAA; ISSN: 0453-073X
DT Journal; General Review
LA Japanese

L5 ANSWER 9 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1994:93753 BIOSIS
DN PREV199497106753
TI The putative **soluble** form of the **erythropoietin** **receptor** (EpoR) does not bind **erythropoietin** (**Epo**).
AU Schimmenti, Lisa A. [Reprint author]; Blechert, Gwendolyn L.; Harris, Kevin W.; Winkelmann, John C.
CS Dep. Med., Inst. Human Genetics, Univ. Minn., Minneapolis, MN, USA
SO Blood, (1993) Vol. 82, No. 10 SUPPL. 1, pp. 228A.
Meeting Info.: Thirty-fifth Annual Meeting of the American Society of Hematology. St. Louis, Missouri, USA. December 3-7, 1993.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 5 Mar 1994
Last Updated on STN: 5 Mar 1994

L5 ANSWER 10 OF 34 MEDLINE on STN
AN 94154637 MEDLINE
DN 94154637 PubMed ID: 8111336
TI [Quantitative measures of erythropoiesis. **Soluble** transferrin **receptor**].
Mesures quantitatives de l'erythropoiese. Le recepteur **soluble** de la transferrine.
AU Beguin Y
CS Service d'Hematologie du C.H.U. Sart-Tilman, Universite de Liege.
SO BULLETIN ET MEMOIRES DE L ACADEMIE ROYALE DE MEDECINE DE BELGIQUE, (1993) 148 (1-2) 100-4; discussion 105-7.
Journal code: 7608462. ISSN: 0377-8231.
CY Belgium
DT Journal; Article; (JOURNAL ARTICLE)
LA French
FS Priority Journals
EM 199403
ED Entered STN: 19940406
Last Updated on STN: 19940406
Entered Medline: 19940331

L5 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1994:555793 CAPLUS
DN 121:155793

TI Production and characterization of recombinant **soluble** form **erythropoietin receptor**
AU Nagao, Masaya; Masuda, Seiji; Abe, Satoshi; Ueda, Masatsugu; Sasaki, Ryuzo
CS Fac. Agric., Kyoto Univ., Kyoto, 606, Japan
SO Anim. Cell Technol.: Basic Appl. Aspects, Proc. Int. Meet. Jpn. Assoc. Anim. Cell Technol., 5th (1993), Meeting Date 1992, 71-7. Editor(s): Kaminogawa, Shuichi; Ametani, Akio; Hachimura, Satoshi. Publisher: Kluwer, Dordrecht, Neth.
CODEN: 60AEAM
DT Conference
LA English

L5 ANSWER 12 OF 34 MEDLINE on STN DUPLICATE 3
AN 94063698 MEDLINE
DN 94063698 PubMed ID: 8244202
TI Adequate iron stores and the 'Nil nocere' principle.
AU Hollan S; Johansen K S
CS National Institute of Haematology, Blood Transfusion and Immunology, Budapest.
SO HAEMATOLOGIA, (1993) 25 (2) 69-84. Ref: 94
Journal code: 0130266. ISSN: 0017-6559.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199401
ED Entered STN: 19940201
Last Updated on STN: 19990129
Entered Medline: 19940105

L5 ANSWER 13 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:200416 BIOSIS
DN PREV199344096666
TI Purification of an active form of the extracellular domain of the human **erythropoietin receptor** and isolation of an **EPO -soluble receptor** complex.
AU Johnson, Dana L.; Middleton, Steven A.; McMahon, Frank J.; Kroon, Daniel; Tsao, Eric; Mulcahy, Linda S.; Jolliffe, Linda K.
CS R. W. Johnson Pharm. Res. Inst., Dep. Mol. Cell. Biol., Route 202, Box 300, Raritan, NJ 08869, USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART A, pp. 47.
Meeting Info.: Keystone Symposium on Protein Purification and Biochemical Engineering. Santa Fe, New Mexico, USA. January 15-21, 1993.
ISSN: 0733-1959.
DT Conference; (Meeting)
LA English
ED Entered STN: 16 Apr 1993
Last Updated on STN: 17 Apr 1993

L5 ANSWER 14 OF 34 MEDLINE on STN DUPLICATE 4
AN 92340575 MEDLINE
DN 92340575 PubMed ID: 1321832
TI Ligand binding properties of the human **erythropoietin receptor** extracellular domain expressed in Escherichia coli.
AU Harris K W; Mitchell R A; Winkelmann J C
CS Department of Medicine, University of Minnesota, Minneapolis 55455.
NC HL39834 (NHLBI)
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1992 Jul 25) 267 (21) 15205-9.
Journal code: 2985121R. ISSN: 0021-9258.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199208
ED Entered STN: 19920911
Last Updated on STN: 19970203
Entered Medline: 19920826

L5 ANSWER 15 OF 34 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 92179898 EMBASE
DN 1992179898
TI Expression cloning of the murine and human interleukin 9 **receptor** cDNAs.
AU Renauld J.-C.; Druez C.; Kermouni A.; Houssiau F.; Uyttenhove C.; Van Roost E.; Van Snick J.
CS Ludwig Institute for Cancer Research, Experimental Medicine Unit, University of Louvain, 74 Avenue Hippocrate,B-1200 Brussels, Belgium
SO Proceedings of the National Academy of Sciences of the United States of America, (1992) 89/12 (5690-5694).
ISSN: 0027-8424 CODEN: PNASA6
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

L5 ANSWER 16 OF 34 MEDLINE on STN DUPLICATE 5
AN 92318911 MEDLINE
DN 92318911 PubMed ID: 1320192
TI The **erythropoietin receptor** transmembrane region is necessary for activation by the Friend spleen focus-forming virus gp55 glycoprotein.
AU Zon L I; Moreau J F; Koo J W; Mathey-Prevot B; D'Andrea A D
CS Department of Pediatrics, Children's Hospital, Dana-Farber Cancer Institute, Harvard Medical School, Boston, Massachusetts 02115.
NC HL02347 (NHLBI)
PO1 HL32262-10 (NHLBI)
SO MOLECULAR AND CELLULAR BIOLOGY, (1992 Jul) 12 (7) 2949-57.
Journal code: 8109087. ISSN: 0270-7306.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199208
ED Entered STN: 19920815
Last Updated on STN: 19970203
Entered Medline: 19920806

L5 ANSWER 17 OF 34 MEDLINE on STN DUPLICATE 6
AN 93075178 MEDLINE
DN 93075178 PubMed ID: 1445329
TI Production and ligand-binding characteristics of the **soluble** form of murine **erythropoietin receptor**.
AU Nagao M; Masuda S; Abe S; Ueda M; Sasaki R
CS Department of Food Science and Technology, Faculty of Agriculture, Kyoto University, Japan.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1992 Oct 30) 188 (2) 888-97.
Journal code: 0372516. ISSN: 0006-291X.
CY United States

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199212
ED Entered STN: 19930122
Last Updated on STN: 19970203
Entered Medline: 19921204

L5 ANSWER 18 OF 34 MEDLINE on STN DUPLICATE 7
AN 93090965 MEDLINE
DN 93090965 PubMed ID: 1457588
TI Iron stores and serum transferrin **receptor** levels during recombinant human **erythropoietin** treatment of anemia in rheumatoid arthritis.
AU Vreugdenhil G; Manger B; Nieuwenhuizen C; Feelders R A; van Eijk H G; Swaak A J
CS Department of Internal Medicine, University Hospital, Nijmegen, The Netherlands.
SO ANNALS OF HEMATOLOGY, (1992 Dec) 65 (6) 265-8.
Journal code: 9107334. ISSN: 0939-5555.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199301
ED Entered STN: 19930129
Last Updated on STN: 19970203
Entered Medline: 19930114

L5 ANSWER 19 OF 34 MEDLINE on STN DUPLICATE 8
AN 93085165 MEDLINE
DN 93085165 PubMed ID: 1453011
TI The human **erythropoietin receptor**.
AU Winkelmann J C
CS Department of Medicine, University of Minnesota Medical School, Minneapolis.
NC R01DK44134 (NIDDK)
SO INTERNATIONAL JOURNAL OF CELL CLONING, (1992 Sep) 10 (5) 254-61. Ref: 52
Journal code: 8308172. ISSN: 0737-1454.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199301
ED Entered STN: 19930129
Last Updated on STN: 19930129
Entered Medline: 19930106

L5 ANSWER 20 OF 34 MEDLINE on STN DUPLICATE 9
AN 92111701 MEDLINE
DN 92111701 PubMed ID: 1730275
TI The **receptors** for regulatory molecules of hematopoiesis.
AU Olsson I; Gullberg U; Lantz M; Richter J
CS Department of Medicine, Lund Hospital, Sweden.
SO EUROPEAN JOURNAL OF HAEMATOLOGY, (1992 Jan) 48 (1) 1-9. Ref: 70
Journal code: 8703985. ISSN: 0902-4441.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

LA English
FS Priority Journals
EM 199202
ED Entered STN: 19920308
Last Updated on STN: 19920308
Entered Medline: 19920220

L5 ANSWER 21 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 10
AN 1992:322839 BIOSIS
DN PREV199294024680; BA94:24680
TI THE **SOLUBLE** TRANSFERRIN **RECEPTOR** BIOLOGICAL ASPECTS
AND CLINICAL USEFULNESS AS QUANTITATIVE MEASURE OF ERYTHROPOIESIS.
AU BEGUIN Y [Reprint author]
CS UNIV LIEGE, DEP HEMATOL, SI-3, CHU SART-TILMAN, 4000 LIEGE, BELGIUM
SO Haematologica, (1992) Vol. 77, No. 1, pp. 1-10.
CODEN: HAEMAX. ISSN: 0390-6078.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 11 Jul 1992
Last Updated on STN: 11 Jul 1992

L5 ANSWER 22 OF 34 MEDLINE on STN DUPLICATE 11
AN 92052252 MEDLINE
DN 92052252 PubMed ID: 1719554
TI Defective membrane expression of human growth hormone (GH)
receptor causes Laron-type GH insensitivity syndrome.
AU Duquesnoy P; Sobrier M L; Amselem S; Goossens M
CS Laboratory of Molecular Genetics, Institut National de la Sante et de la
Recherche Medicale U.91, Hopital Henri Mondor, Creteil, France.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
AMERICA, (1991 Nov 15) 88 (22) 10272-6.
Journal code: 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199112
ED Entered STN: 19920124
Last Updated on STN: 19970203
Entered Medline: 19911226

L5 ANSWER 23 OF 34 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
AN 91288521 EMBASE
DN 1991288521
TI Leukemia inhibitory factor **receptor** is structurally related to
the IL-6 signal transducer, gp130.
AU Gearing D.P.; Thut C.J.; VandenBos T.; Gimpel S.D.; Delaney P.B.; King J.;
Price V.; Cosman D.; Beckmann M.P.
CS Immunex Corporation, 51 University Street,Seattle, WA 98101, United States
SO EMBO Journal, (1991) 10/10 (2839-2848).
ISSN: 0261-4189 CODEN: EMJODG
CY United Kingdom
DT Journal; Article
FS 022 Human Genetics
029 Clinical Biochemistry
LA English
SL English

L5 ANSWER 24 OF 34 MEDLINE on STN DUPLICATE 12

AN 91356019 MEDLINE
DN 91356019 PubMed ID: 1715791
TI Suppression of chronic myelogenous leukemia colony growth by interleukin-1 (IL-1) **receptor** antagonist and **soluble** IL-1 **receptors**: a novel application for inhibitors of IL-1 activity.
AU Estrov Z; Kurzrock R; Wetzler M; Kantarjian H; Blake M; Harris D; Gutterman J U; Talpaz M
CS Department of Clinical Immunology and Biological Therapy, University of Texas M.D. Anderson Cancer Center, Houston 77030.
SO BLOOD, (1991 Sep 15) 78 (6) 1476-84.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199110
ED Entered STN: 19911027
Last Updated on STN: 19960129
Entered Medline: 19911004

L5 ANSWER 25 OF 34 MEDLINE on STN
AN 91366779 MEDLINE
DN 91366779 PubMed ID: 1890732
TI Expression and extracellular release of transferrin **receptors** on erythropoiesis.
AU Kohgo Y; Kondo H; Hirayama M; Tsushima N; Itoh Y; Shintani N; Fujikawa K; Miyazaki E; Niitsu Y
CS Fourth Department of Internal Medicine, Sapporo Medical College.
SO RINSHO KETSUEKI. JAPANESE JOURNAL OF CLINICAL HEMATOLOGY, (1991 Jun) 32 (6) 580-6. Ref: 17
Journal code: 2984782R. ISSN: 0485-1439.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA Japanese
FS Priority Journals
EM 199110
ED Entered STN: 19911103
Last Updated on STN: 19911103
Entered Medline: 19911016

L5 ANSWER 26 OF 34 MEDLINE on STN DUPLICATE 13
AN 92039091 MEDLINE
DN 92039091 PubMed ID: 1657727
TI Isolation of a cDNA encoding a potential **soluble receptor** for human **erythropoietin**.
AU Todokoro K; Kuramochi S; Nagasawa T; Abe T; Ikawa Y
CS Tsukuba Life Science Center, Institute of Physical and Chemical Research (RIKEN), Ibaraki, Japan.
SO GENE, (1991 Oct 15) 106 (2) 283-4.
Journal code: 7706761. ISSN: 0378-1119.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-X57282
EM 199112
ED Entered STN: 19920124
Last Updated on STN: 19990129
Entered Medline: 19911223

L5 ANSWER 27 OF 34 MEDLINE on STN DUPLICATE 14
AN 92136003 MEDLINE
DN 92136003 PubMed ID: 1663810
TI The cytokine **receptor** superfamily.
AU Kaczmarski R S; Mufti G J
CS Department of Haematological Medicine, King's College School of Medicine and Dentistry, London, UK.
SO BLOOD REVIEWS, (1991 Sep) 5 (3) 193-203. Ref: 98
Journal code: 8708558. ISSN: 0268-960X.
CY SCOTLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199203
ED Entered STN: 19920329
Last Updated on STN: 19920329
Entered Medline: 19920310

L5 ANSWER 28 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1991:332504 BIOSIS
DN PREV199141029054; BR41:29054
TI A RECOMBINANT **SOLUBLE ERYTHROPOIETIN RECEPTOR** EXPRESSION AND INITIAL BIOCHEMICAL-BIOLOGICAL CHARACTERIZATION.
AU JONES S S [Reprint author]; YANKELEV S
CS GENETICS INST INC, 87 CAMBRIDGE PARK DRIVE, CAMBRIDGE, MASS 02140, USA
SO Journal of Cellular Biochemistry Supplement, (1991) No. 15 PART F, pp. 114.
Meeting Info.: MEETING ON CYTOKINES AND THEIR RECEPTORS: FROM CLONAL TO CLINICAL INVESTIGATION HELD AT THE 20TH ANNUAL MEETING OF THE KEYSTONE SYMPOSIA ON MOLECULAR AND CELLULAR BIOLOGY, KEYSTONE, COLORADO, USA, APRIL 1-7, 1991. J CELL BIOCHEM SUPPL.
ISSN: 0733-1959.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 20 Jul 1991
Last Updated on STN: 20 Jul 1991

L5 ANSWER 29 OF 34 MEDLINE on STN DUPLICATE 15
AN 91346023 MEDLINE
DN 91346023 PubMed ID: 1652271
TI The growth hormone binding protein as a paradigm of the **erythropoietin** superfamily of **receptors**.
AU Hochberg Z; Amit T; Youdim M B
CS Department of Pharmacology, Rappaport Family Institute for Research in the Medical Sciences, Technion--Israel Institute of Technology, Haifa.
SO CELLULAR SIGNALLING, (1991) 3 (2) 85-91. Ref: 74
Journal code: 8904683. ISSN: 0898-6568.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199110
ED Entered STN: 19911020
Last Updated on STN: 19911020
Entered Medline: 19911003

L5 ANSWER 30 OF 34 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN

AN 1991:516764 BIOSIS
DN PREV199141117479; BR41:117479
TI PURIFICATION AND CHARACTERIZATION OF A **SOLUBLE** FORM OF THE MURINE **ERYTHROPOIETIN RECEPTOR**.
AU JOHNSON D L [Reprint author]; MULCAHY L J; AGARWAL M; PELLEGRINO J L; JOLLIFFE L K
CS RW JOHNSON PHARM RES INST, ROUTE 202, BOX 300, RARITAN, NJ 08876, USA
SO Abstracts of Papers American Chemical Society, (1991) Vol. 202, No. 1-2, pp. BIOL 108.
Meeting Info.: FOURTH CHEMICAL CONGRESS OF NORTH AMERICA, NEW YORK, NEW YORK, USA, AUGUST 25-30, 1991. ABSTR PAP AM CHEM SOC.
CODEN: ACSRAL. ISSN: 0065-7727.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 14 Nov 1991
Last Updated on STN: 8 Jan 1992

L5 ANSWER 31 OF 34 MEDLINE on STN DUPLICATE 16
AN 91080149 MEDLINE
DN 91080149 PubMed ID: 2175360
TI Characterization of murine **erythropoietin receptor** genes.
AU Kuramochi S; Ikawa Y; Todokoro K
CS Tsukuba Life Science Center, Institute of Physical and Chemical Research (RIKEN), Ibaraki, Japan.
SO JOURNAL OF MOLECULAR BIOLOGY, (1990 Dec 5) 216 (3) 567-75.
Journal code: 2985088R. ISSN: 0022-2836.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-X53081
EM 199101
ED Entered STN: 19910322
Last Updated on STN: 19910322
Entered Medline: 19910131

L5 ANSWER 32 OF 34 MEDLINE on STN DUPLICATE 17
AN 89008614 MEDLINE
DN 89008614 PubMed ID: 3049627
TI Specific binding, internalization, and degradation of human recombinant interleukin-3 by cells of the acute myelogenous, leukemia line, KG-1.
AU Gesner T G; Mufson R A; Norton C R; Turner K J; Yang Y C; Clark S C
CS Genetics Institute, Inc., Cambridge, Massachusetts 02140.
SO JOURNAL OF CELLULAR PHYSIOLOGY, (1988 Sep) 136 (3) 493-9.
Journal code: 0050222. ISSN: 0021-9541.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198811
ED Entered STN: 19900308
Last Updated on STN: 19900308
Entered Medline: 19881114

L5 ANSWER 33 OF 34 MEDLINE on STN DUPLICATE 18
AN 87270771 MEDLINE
DN 87270771 PubMed ID: 3038112
TI The expression of functional **erythropoietin receptors** on an interleukin-3 dependent cell line.
AU Sakaguchi M; Koishihara Y; Tsuda H; Fujimoto K; Shibuya K; Kawakita M;

Cell 1989
57(2) 277-85

=> d 4, 5, 10, 12 bib ab

L6 ANSWER 4 OF 25 MEDLINE on STN DUPLICATE 3 D'Andrea.
AN 94003259 MEDLINE
DN 94003259 PubMed ID: 8400258
TI Serum form of the **erythropoietin receptor** identified by a sequence-specific peptide antibody.
CM Comment in: Blood. 1993 Oct 1;82(7):1945-8
Comment in: Blood. 1996 Oct 15;88(8):3246-7
AU Baynes R D; Reddy G K; Shih Y J; Skikne B S; Cook J D
CS Department of Medicine, Kansas University Medical Center, Kansas City 66160-7402.
SO BLOOD, (1993 Oct 1) 82 (7) 2088-95.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 19980206
Entered Medline: 19931110
AB The present investigation was undertaken to search for soluble forms of the **erythropoietin receptor** in human serum using polyclonal antibody against an amino terminal peptide sequence in the **extracellular domain**. This sequence was located adjacent to the amino terminus at residues 25-38. When this antibody was used for Western blots of solubilized membranes from nucleated bone marrow cells, a protein consistent with native **erythropoietin receptor** was seen. Purified soluble ectodomain of the **erythropoietin receptor** displayed appropriate reactivity with this antibody. When sera from normal subjects and patients with a range of hematologic disorders were examined by Western blotting, a protein with a molecular mass of 34 Kd was detected in sera from patients with enhanced erythropoiesis including sickle cell anemia, thalassemia, and megaloblastic anemia. This protein was rarely detected in normal serum but appeared when normal subjects were treated with recombinant **erythropoietin** and disappeared after full treatment of patients with megaloblastic anemia due to vitamin B12 deficiency. The protein was not detected after myeloablation for bone marrow transplantation but appeared with marrow engraftment. Reactivity of this protein with the peptide antibody was competitively inhibited by the amino terminal peptide sequence. An additional 48 Kd protein was detected that showed minimal variation in intensity with differing degrees of erythropoietic activity. Detection of this protein could not be inhibited by the addition of synthetic peptide. Our findings indicate the presence of a soluble form of the **erythropoietin receptor** related to the **extracellular domain** that is highly correlated with enhanced erythropoiesis.

L6 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1993:420668 CAPLUS
DN 119:20668
TI Erythroproietin **receptor** binds to Friend virus GP55 through other membrane components
AU Kishi, Atsushi; Chiba, Tomoki; Sugiyama, Masahide; Machide, Mitsuru; Nagata, Yuka; Amanuma, Hiroshi; Taira, Hideharu; Katsumata, Teizou; Todokoro, Kazuo
CS Tsukuba Life Sci. Cent., Inst. Phys. Chem. Res., Tsukuba, 305, Japan
SO Biochemical and Biophysical Research Communications (1993), 192(3), 1131-8
CODEN: BBRCA9; ISSN: 0006-291X

DT Journal
LA English
AB Direct interactions of Friend spleen focus-forming virus glycoprotein gp55 with either **erythropoietin receptor** (EpoR) or interleukin (IL)2 **receptor** .beta. chain (IL2R) (but not with IL3 **receptor**) have been reported to induce factor-independent prolonged proliferation of erythroid or lymphoid cells. In order to clarify the mol. mechanism by which EpoR-gp55 complex transmits an aberrant growth signal in the absence of **erythropoietin**, various chimeric receptors constituted with IL2R, EpoR, or IL3 **receptor** were constructed. It was found that coexpression of gp55 and the chimeric receptors contg. the cytoplasmic domains of EpoR and the extracellular domains of IL3 (or IL2) **receptor** in IL3-dependent Ba/F3 cells results in factor-independent growth. Since gp55 in cell membrane has only a 2 amino acid tail in the cytoplasmic domains and thus cannot interact with EpoR in cytoplasm, the data suggest that gp55 does not bind EpoR directly but interacts with EpoR through third membrane component(s).

L6 ANSWER 10 OF 25 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1994:93752 BIOSIS
DN PREV199497106752
TI Biochemical studies on the **extracellular domain** of the human **erythropoietin receptor**.
AU Jones, S. S. [Reprint author]; Yet, M.-G.; Chin, C. C. Q.
CS Genetics Inst. Inc., 87 Cambridge Park Dr., Cambridge, MA, USA
SO Blood, (1993) Vol. 82, No. 10 SUPPL. 1, pp. 228A.
Meeting Info.: Thirty-fifth Annual Meeting of the American Society of Hematology. St. Louis, Missouri, USA. December 3-7, 1993.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 5 Mar 1994
Last Updated on STN: 5 Mar 1994

L6 ANSWER 12 OF 25 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:292774 BIOSIS
DN PREV199345010899
TI Ligand-dependent dimerization of recombinant human **erythropoietin receptor extracellular domain**.
AU Harris, Kevin W.; Winkelmann, John C.
CS Dep. Med., Inst. Human Genetics, University Minnesota, Minneapolis, MN, USA
SO Clinical Research, (1993) Vol. 41, No. 2, pp. 134A.
Meeting Info.: Joint Meeting of the Association of American Physicians, the American Society for Clinical Investigation, and the American Federation for Clinical Research. Washington, DC, USA. April 30-May 3, 1993.
CODEN: CLREAS. ISSN: 0009-9279.
DT Conference; (Meeting)
LA English
ED Entered STN: 17 Jun 1993
Last Updated on STN: 18 Jun 1

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L6 ANSWER 1 OF 25 MEDLINE on STN DUPLICATE 1
AN 93340191 MEDLINE
DN 93340191 PubMed ID: 8340408
TI Ligand-dependent activation of chimeric receptors with the cytoplasmic domain of the interleukin-3 **receptor** beta subunit (beta IL3).
AU Sakamaki K; Wang H M; Miyajima I; Kitamura T; Todokoro K; Harada N; Miyajima A
CS Department of Molecular Biology, DNAX Research Institute of Molecular and Cellular Biology, Palo Alto, California 94304.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1993 Jul 25) 268 (21) 15833-9.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199308
ED Entered STN: 19930917
Last Updated on STN: 19980206
Entered Medline: 19930830

L6 ANSWER 2 OF 25 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:480145 BIOSIS
DN PREV199396113745
TI MPTP-delta, a putative murine homolog of HPTP-delta, is expressed in specialized regions of the brain and in the B-cell lineage.
AU Mizuno, Kazuya; Hasegawa, Kiminori; Katagiri, Tatsuo; Ogimoto, Mami; Ichikawa, Tomoyuki; Yakura, Hidetaki [Reprint author]
CS Tokyo Metropolitan Inst. Neurosci., 2-6 Musashidai, Fuchu, Tokyo 183, Japan
SO Molecular and Cellular Biology, (1993) Vol. 13, No. 9, pp. 5513-5523.
CODEN: MCEBD4. ISSN: 0270-7306.
DT Article
LA English
ED Entered STN: 22 Oct 1993
Last Updated on STN: 23 Oct 1993

L6 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 2
AN 1993:406094 CAPLUS
DN 119:6094
TI A Friend virus mutant that overcomes Fv-2rr host resistance encodes a small glycoprotein that dimerizes, is processed to cell surfaces, and specifically activates **erythropoietin** receptors
AU Kozak, Susan L.; Hoatlin, Maureen E.; Ferro, Frank E., Jr.; Majumdar, Manas K.; Geib, Roy W.; Fox, Mary T.; Kabat, David
CS Sch. Med., Oregon Health Sci. Univ., Portland, OR, 97201-3098, USA
SO Journal of Virology (1993), 67(5), 2611-20
CODEN: JOVIAM; ISSN: 0022-538X
DT Journal
LA English

L6 ANSWER 4 OF 25 MEDLINE on STN DUPLICATE 3
AN 94003259 MEDLINE
DN 94003259 PubMed ID: 8400258
TI Serum form of the **erythropoietin receptor** identified by a sequence-specific peptide antibody.
CM Comment in: Blood. 1993 Oct 1;82(7):1945-8
Comment in: Blood. 1996 Oct 15;88(8):3246-7
AU Baynes R D; Reddy G K; Shih Y J; Skikne B S; Cook J D
CS Department of Medicine, Kansas University Medical Center, Kansas City

66160-7402.
SO BLOOD, (1993 Oct 1) 82 (7) 2088-95.
Journal code: 7603509. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 19980206
Entered Medline: 19931110

L6 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1993:420668 CAPLUS
DN 119:20668
TI Erythroproietin **receptor** binds to Friend virus GP55 through other membrane components
AU Kishi, Atsushi; Chiba, Tomoki; Sugiyama, Masahide; Machide, Mitsuru; Nagata, Yuka; Amanuma, Hiroshi; Taira, Hideharu; Katsumata, Teizou; Todokoro, Kazuo
CS Tsukuba Life Sci. Cent., Inst. Phys. Chem. Res., Tsukuba, 305, Japan
SO Biochemical and Biophysical Research Communications (1993), 192(3), 1131-8
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English

L6 ANSWER 6 OF 25 MEDLINE on STN DUPLICATE 4
AN 93173524 MEDLINE
DN 93173524 PubMed ID: 8382360
TI The 'WS motif' common to v-mpl and members of the cytokine **receptor** superfamily is dispensable for myeloproliferative leukemia virus pathogenicity.
AU Benit L; Charon M; Cocault L; Wendling F; Gisselbrecht S
CS INSERM U363, ICGM, Hopital Cochin, Paris, France.
SO ONCOGENE, (1993 Mar) 8 (3) 787-90.
Journal code: 8711562. ISSN: 0950-9232.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199303
ED Entered STN: 19930402
Last Updated on STN: 19970203
Entered Medline: 19930325

L6 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1993:426363 CAPLUS
DN 119:26363
TI Tyrosine kinase activation through the extracellular domains of cytokine receptors
AU Chiba, Tomoki; Nagata, Yuka; Machide, Mitsuru; Kishi, Atsushi; Amanuma, Hiroshi; Sugiyama, Masahide; Todokoro, Kazuo
CS Tsukuba Life Sci. Cent., Inst. Phys. Chem., Tsukuba, 305, Japan
SO Nature (London, United Kingdom) (1993), 362(6421), 646-8
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA English

L6 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1994:619 CAPLUS
DN 120:619
TI Signal transduction through the **receptor** for

erythropoietin
AU Ihle, James N.; Quelle, Frederick W.; Miura, Osamu
CS Dep. Biochem., St. Jude Child. Res. Hosp., Memphis, TN, 38105, USA
SO Seminars in Immunology (1993), 5(5), 375-89
CODEN: SEIME2; ISSN: 1044-5323
DT Journal; General Review
LA English

L6 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 5
AN 1994:161264 CAPLUS
DN 120:161264
TI The proline-rich motif (PRM): A novel feature of the cytokine/hematopoietin **receptor** superfamily
AU O'Neal, Kevin D.; Yu-Lee, Li Yuan
CS Dep. Microbiol., Baylor Coll. Med., Houston, TX, 77030, USA
SO Lymphokine and Cytokine Research (1993), 12(5), 309-12
CODEN: LCREEY; ISSN: 1056-5477
DT Journal
LA English

L6 ANSWER 10 OF 25 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1994:93752 BIOSIS
DN PREV199497106752
TI Biochemical studies on the **extracellular domain** of the human **erythropoietin receptor**.
AU Jones, S. S. [Reprint author]; Yet, M.-G.; Chin, C. C. Q.
CS Genetics Inst. Inc., 87 Cambridge Park Dr., Cambridge, MA, USA
SO Blood, (1993) Vol. 82, No. 10 SUPPL. 1, pp. 228A.
Meeting Info.: Thirty-fifth Annual Meeting of the American Society of Hematology. St. Louis, Missouri, USA. December 3-7, 1993.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 5 Mar 1994
Last Updated on STN: 5 Mar 1994

L6 ANSWER 11 OF 25 MEDLINE on STN DUPLICATE 6
AN 94028971 MEDLINE
DN 94028971 PubMed ID: 8215404
TI Dimer- and oligomerization of the **erythropoietin receptor** by disulfide bond formation and significance of the region near the WSXWS motif in intracellular transport.
AU Miura O; Ihle J N
CS Department of Biochemistry, St. Jude Children's Research Hospital, Memphis, Tennessee 38101.
NC P30 CA21765 (NCI)
SO ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (1993 Oct) 306 (1) 200-8.
Journal code: 0372430. ISSN: 0003-9861.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199311
ED Entered STN: 19940117
Last Updated on STN: 19940117
Entered Medline: 19931102

L6 ANSWER 12 OF 25 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:292774 BIOSIS
DN PREV199345010899

TI Ligand-dependent dimerization of recombinant human **erythropoietin receptor extracellular domain**.
AU Harris, Kevin W.; Winkelmann, John C.
CS Dep. Med., Inst. Human Genetics, University Minnesota, Minneapolis, MN, USA
SO Clinical Research, (1993) Vol. 41, No. 2, pp. 134A.
Meeting Info.: Joint Meeting of the Association of American Physicians, the American Society for Clinical Investigation, and the American Federation for Clinical Research. Washington, DC, USA. April 30-May 3, 1993.
CODEN: CLREAS. ISSN: 0009-9279.
DT Conference; (Meeting)
LA English
ED Entered STN: 17 Jun 1993
Last Updated on STN: 18 Jun 1993

L6 ANSWER 13 OF 25 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:286028 BIOSIS
DN PREV199345004153
TI Random mutagenesis of the **extracellular domain** of the human **erythropoietin receptor**.
AU Barbone, Francis P.; Jolliffe, Linda K.; Mulcahy, Linda S.
CS R. W. JOHNSON Pharm. Res. Inst., Raritan, NJ 08869, USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART B, pp. 72.
Meeting Info.: Keystone Symposium on Cytokines and Cytokine Receptors: From Cloning to the Clinic. Keystone, Colorado, USA. January 31-February 7, 1993.
ISSN: 0733-1959.
DT Conference; (Meeting)
LA English
ED Entered STN: 17 Jun 1993
Last Updated on STN: 18 Jun 1993

L6 ANSWER 14 OF 25 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:200416 BIOSIS
DN PREV199344096666
TI Purification of an active form of the **extracellular domain** of the human **erythropoietin receptor** and isolation of an EPO-soluble **receptor** complex.
AU Johnson, Dana L.; Middleton, Steven A.; McMahon, Frank J.; Kroon, Daniel; Tsao, Eric; Mulcahy, Linda S.; Jolliffe, Linda K.
CS R. W. Johnson Pharm. Res. Inst., Dep. Mol. Cell. Biol., Route 202, Box 300, Raritan, NJ 08869, USA
SO Journal of Cellular Biochemistry Supplement, (1993) Vol. 0, No. 17 PART A, pp. 47.
Meeting Info.: Keystone Symposium on Protein Purification and Biochemical Engineering. Santa Fe, New Mexico, USA. January 15-21, 1993.
ISSN: 0733-1959.
DT Conference; (Meeting)
LA English
ED Entered STN: 16 Apr 1993
Last Updated on STN: 17 Apr 1993

L6 ANSWER 15 OF 25 MEDLINE on STN DUPLICATE 7
AN 92340575 MEDLINE
DN 92340575 PubMed ID: 1321832
TI Ligand binding properties of the human **erythropoietin receptor extracellular domain** expressed in Escherichia coli.
AU Harris K W; Mitchell R A; Winkelmann J C
CS Department of Medicine, University of Minnesota, Minneapolis 55455.

NC HL39834 (NHLBI)
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1992 Jul 25) 267 (21) 15205-9.
Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199208
ED Entered STN: 19920911
Last Updated on STN: 19970203
Entered Medline: 19920826

L6 ANSWER 16 OF 25 MEDLINE on STN DUPLICATE 8
AN 92260637 MEDLINE
DN 92260637 PubMed ID: 1583724
TI Mutations in the env gene of friend spleen focus-forming virus overcome Fv-2r-mediated resistance to Friend virus-induced erythroleukemia.
AU Majumdar M K; Cho C L; Fox M T; Eckner K L; Kozak S; Kabat D; Geib R W
CS Department of Life Sciences, Indiana State University, Terre Haute.
NC CA22810 (NCI)
CA47944 (NCI)
SO JOURNAL OF VIROLOGY, (1992 Jun) 66 (6) 3652-60.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
OS GENBANK-M90673
EM 199206
ED Entered STN: 19920626
Last Updated on STN: 19970203
Entered Medline: 19920616

L6 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1992:248674 CAPLUS
DN 116:248674
TI Tryptophan residue of Trp-Ser-X-Trp-Ser motif in extracellular domains of **erythropoietin receptor** is essential for signal transduction
AU Chiba, Tomoki; Amanuma, Hiroshi; Todokoro, Kazuo
CS Tsukuba Life Sci. Cent., Inst. Phys. Chem. Res., Tsukuba, 305, Japan
SO Biochemical and Biophysical Research Communications (1992), 184(1), 485-90
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English

L6 ANSWER 18 OF 25 MEDLINE on STN DUPLICATE 9
AN 92052252 MEDLINE
DN 92052252 PubMed ID: 1719554
TI Defective membrane expression of human growth hormone (GH) **receptor** causes Laron-type GH insensitivity syndrome.
AU Duquesnoy P; Sobrier M L; Amselem S; Goossens M
CS Laboratory of Molecular Genetics, Institut National de la Sante et de la Recherche Medicale U.91, Hopital Henri Mondor, Creteil, France.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1991 Nov 15) 88 (22) 10272-6.
Journal code: 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199112

ED Entered STN: 19920124
Last Updated on STN: 19970203
Entered Medline: 19911226

L6 ANSWER 19 OF 25 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1991:519614 BIOSIS
DN PREV199141120329; BR41:120329
TI LIGAND BINDING PROPERTIES OF THE HUMAN **ERYTHROPOIETIN RECEPTOR EXTRACELLULAR DOMAIN** EXPRESSED IN ESCHERICHIA-COLI.
AU HARRIS K W [Reprint author]; MITCHEL R A; WINKELMANN J C
CS DEP MED, UNIV MINN, MINNEAPOLIS, MINN, USA
SO Clinical Research, (1991) Vol. 39, No. 3, pp. 724A.
Meeting Info.: JOINT MEETING OF THE CENTRAL SOCIETY FOR CLINICAL RESEARCH, MIDWEST SECTION AMERICAN FEDERATION FOR CLINICAL RESEARCH, MIDWEST SOCIETY FOR PEDIATRIC RESEARCH AND CENTRAL REGION SOCIETY FOR INVESTIGATIVE DERMATOLOGY, CHICAGO, ILLINOIS, USA, NOVEMBER 6-8, 1991. CLIN RES.
CODEN: CLREAS. ISSN: 0009-9279.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 14 Nov 1991
Last Updated on STN: 14 Nov 1991

L6 ANSWER 20 OF 25 MEDLINE on STN DUPLICATE 10
AN 92136003 MEDLINE
DN 92136003 PubMed ID: 1663810
TI The cytokine **receptor** superfamily.
AU Kaczmarski R S; Mufti G J
CS Department of Haematological Medicine, King's College School of Medicine and Dentistry, London, UK.
SO BLOOD REVIEWS, (1991 Sep) 5 (3) 193-203. Ref: 98
Journal code: 8708558. ISSN: 0268-960X.
CY SCOTLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199203
ED Entered STN: 19920329
Last Updated on STN: 19920329
Entered Medline: 19920310

L6 ANSWER 21 OF 25 MEDLINE on STN DUPLICATE 11
AN 91346023 MEDLINE
DN 91346023 PubMed ID: 1652271
TI The growth hormone binding protein as a paradigm of the **erythropoietin** superfamily of receptors.
AU Hochberg Z; Amit T; Youdim M B
CS Department of Pharmacology, Rappaport Family Institute for Research in the Medical Sciences, Technion--Israel Institute of Technology, Haifa.
SO CELLULAR SIGNALLING, (1991) 3 (2) 85-91. Ref: 74
Journal code: 8904683. ISSN: 0898-6568.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199110
ED Entered STN: 19911020

Last Updated on STN: 19911020
Entered Medline: 19911003

L6 ANSWER 22 OF 25 MEDLINE on STN DUPLICATE 12
AN 90278354 MEDLINE
DN 90278354 PubMed ID: 2112585
TI Functional murine interleukin 6 **receptor** with the intracisternal A particle gene product at its cytoplasmic domain. Its possible role in plasmacytomagenesis.
AU Sugita T; Totsuka T; Saito M; Yamasaki K; Taga T; Hirano T; Kishimoto T
CS Institute for Molecular and Cellular Biology, Osaka University, Japan.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (1990 Jun 1) 171 (6) 2001-9.
Journal code: 2985109R. ISSN: 0022-1007.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-X51975; GENBANK-X51976
EM 199007
ED Entered STN: 19900824
Last Updated on STN: 19980206
Entered Medline: 19900716

L6 ANSWER 23 OF 25 MEDLINE on STN DUPLICATE 13
AN 90171849 MEDLINE
DN 90171849 PubMed ID: 2307934
TI Human interleukin 4 **receptor** confers biological responsiveness and defines a novel **receptor** superfamily.
AU Idzerda R L; March C J; Mosley B; Lyman S D; Vanden Bos T; Gimpel S D; Din W S; Grabstein K H; Widmer M B; Park L S; +
CS Immunex Corporation, Seattle, Washington 98101.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (1990 Mar 1) 171 (3) 861-73.
Journal code: 2985109R. ISSN: 0022-1007.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-X52425
EM 199004
ED Entered STN: 19900601
Last Updated on STN: 19980206
Entered Medline: 19900412

L6 ANSWER 24 OF 25 MEDLINE on STN DUPLICATE 14
AN 90138976 MEDLINE
DN 90138976 PubMed ID: 2405398
TI Expression cloning of a cDNA encoding the murine interleukin 4 **receptor** based on ligand binding.
AU Harada N; Castle B E; Gorman D M; Itoh N; Schreurs J; Barrett R L; Howard M; Miyajima A
CS Department of Immunology, DNAX Research Institute of Molecular and Cellular Biology, Palo Alto, CA 94304.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1990 Feb) 87 (3) 857-61.
Journal code: 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-M29854
EM 199003
ED Entered STN: 19900328

Last Updated on STN: 19980206
Entered Medline: 19900314

L6 ANSWER 25 OF 25 MEDLINE on STN DUPLICATE 15
AN 90059966 MEDLINE
DN 90059966 PubMed ID: 2555171
TI Expression cloning of a **receptor** for human granulocyte-macrophage colony-stimulating factor.
AU Gearing D P; King J A; Gough N M; Nicola N A
CS Walter and Eliza Hall Institute of Medical Research, Royal Melbourne Hospital, Victoria, Australia.
NC CA-22556 (NCI)
SO EMBO JOURNAL, (1989 Dec 1) 8 (12) 3667-76.
Journal code: 8208664. ISSN: 0261-4189.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199001
ED Entered STN: 19900328
Last Updated on STN: 19970203
Entered Medline: 19900111

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